

List of All Chemicals

P Solanum dulcamara (Solanaceae)

Common name(s)

Bitter Nightshade; Bittersweet

How used

Medicinal

*Unless otherwise noted all references are to Duke, James A. 1992. Handbook of phytochemical constituents of GRAS herbs and other economic plants. Boca Raton, FL. CRC Press.

Chemical	Plant Part	Low PPM	High PPM	StdDev	*Reference
15ALPHA-HYDROXYSOLADULCIDINE	Root	--	--		*
15ALPHA-HYDROXYSOLASODINE	Root	--	--		*
15ALPHA-HYDROXYTOMATADENOL	Root	--	--		*
15ALPHA-HYDROXYTOMATADIDINE	Root	--	--		*
2,4-METHYLENE-CHOLESTEROL	Tissue Culture	--	--		*
24-METHYLENE-CYCLOARTENOL	Tissue Culture	--	--		*
3,5-TOMATIDIENE	Shoot	--	--		*
31-NOR-LANOSTEROL	Seed	--	--		*
3BETA-5-TOMATIDEN-OL	Shoot	--	--		*
ALPHA-SOLADULCINE	Plant	--	--		*
ALPHA-SOLAMARINE	Plant	--	--		*
ATROPINE	Seed	--	--		*

Activities (51)

Allergenic	
Analgesic	
Anesthetic	Martindale's 29th
Anhydrotic	
Antianoxic	Martindale's 29th
Antiarrhythmic 400-1,000 ug	
Antiasthmatic	Martindale's 28th
Antibradycardic 300-600 ug/ims/man/day	Martindale's 28th
Anticholinergic 0.55 mg/kg orl mus	Borchard, R. E., Barnes, C. D., and Eltherton, L. G. 1991. Drug Dosage in Laboratory Animals: A Handbook. (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006.
Anticholinergic 10 mg/kg orl rat	Borchard, R. E., Barnes, C. D., and Eltherton, L. G. 1991. Drug Dosage in Laboratory Animals: A Handbook. (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006.
Antidote (Anticholinesterase) 2 mg/man/ims	Martindale's 29th
Antidote (Black Widow)	Martindale's 29th
Antidote (Lobelia) 2 mg scu	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antidote (Muscarine)	
Antidote (Mushroom)	Martindale's 30th
Antidote (Organophosphorus) 2-10 mg/ims/man	Martindale's 29th
Antidote (Poison Gas)	
Antidote (Tetrodotoxin)	
Antiemetic	Martindale's 29th
Antiemphysemic	Martindale's 29th
Antienuretic	Martindale's 28th
Antiherpetic	
Antiiritic	Martindale's 30th
Antimuscarinic	Martindale's 29th
Antiparkinsonian	Martindale's 29th
Antiperistaltic	
Antiperspirant	Martindale's 29th

Antipolio	
Antisialagogue	Martindale's 28th
Antispasmodic	Merck 11th Edition
Antiulcer 500 ug/3 x/day/man	Martindale's 28th
Antiueveitic	Martindale's 30th
Antivertigo	
Antiviral	
Bronchodilator	
CNS-Depressant	Martindale's 28th
CNS-Stimulant	
Choleretic	
Hyperpyrexia	Merck 11th Edition
Insecticide	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Mydriatic	Merck 11th Edition
Myorelaxant	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Neurotoxic	R.J. Hixtable (Huxtable, R.J. (as T. Max). 1992. This and That: The Essential Pharmacology of Herbs and Spices. Tips 13:15-20 Huxtable, R.J. 1992b. The Myth of Benificent Nature. The Risk of Herbal Preparations. Anns. Intern. Med. 117(2):165-6; Huxtable, R.
Paralytic	
Pesticide	
Psychotomimetic	R.J. Hixtable (Huxtable, R.J. (as T. Max). 1992. This and That: The Essential Pharmacology of Herbs and Spices. Tips 13:15-20 Huxtable, R.J. 1992b. The Myth of Benificent Nature. The Risk of Herbal Preparations. Anns. Intern. Med. 117(2):165-6; Huxtable, R.
Tachycardic 2 mg/orl/man	Martindale's 28th
Transdermal	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
Tumorigenic	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Vasodilator	Merck 11th Edition

BETA-SITOSTEROL

Leaf

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Activities (47)

Androgenic	
Angiogenic	
Anorexic	Martindale's 28th
Antiadenomic	Merck 11th Edition
Antiangiogenic	Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990.
Antibacterial	Recently became Internat. J. Crude Drug Res. 28(1,2,3,4):1990, page 155.
Anticancer (Breast)	Madhavi, D. L., Bomser, J., Smith, M., Singletary, K. 1998. Isolation of Bioactive Constituents from Vaccinium myrtillus (Bilberry) Fruits and Cell Cultures. Plant Sci., 131(1): 95-103.
Anticancer (Cervix)	
Anticancer (Lung)	
Antiedemic IC54=320 mg/kg orl	
Antiendrogenic	Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990.
Antifeedant	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Antifertility	Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990.
Antigonadotrophic	Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990.
Antihyperlipoproteinaemic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Antiinflammatory	
Antileukemic	
Antilymphomic	
Antimutagenic 250 ug/ml	
Antiopidic 2.3 mg mus	Economic & Medicinal Plant Research, 5: 363.
Antioxidant IC44=10 uM	
Antiprogestational	Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990.
Antiprostaglandin 30 mg/day/12 wks	
Antiprostataadenomic	Merck 11th Edition
Antiprostatic 10-20 mg 3 x/day/ori man	
Antipyretic	Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp.
Antitumor (Breast)	Madhavi, D. L., Bomser, J., Smith, M., Singletary, K. 1998. Isolation of Bioactive Constituents from Vaccinium myrtillus (Bilberry) Fruits and Cell Cultures. Plant Sci., 131(1): 95-103.
Antitumor (Cervix)	
Antitumor (Lung)	
Antiviral	Abid Ali Khan, M.M., Jain, D.C., Bhakuni, R.S., Zaim, M., and Thakur, R.S. 1991. Occurrence of some antiviral sterols in Artemisia annua. Plant Science, 75: 161-165, 1991.
Apoptotic	
Artemicide LC50=110 ppm	Jung, J.H., Pummangura, S., Chaichantipyuth, C., Patarapanich, C., and McLaughlin, J.L. 1989. Bioactive Constituents of Melodorum fruticosum. Phytochemistry. 29(5): 1667-1670. 1990.
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Candidicidal	Recently became Internat. J. Crude Drug Res. 28(1,2,3,4):1990, page 155.

Estrogenic	
Febrifuge	Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp.
Gonadotrophic	Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990.
Hepatoprotective	
Hypocholesterolemic 2-6 g/man/day/orl	Martindale's 30th
Hypocholesterolemic 9-3,330 mg/man/day/orl	Martindale's 28th
Hypoglycemic	Ivorra, M.D., Paya, M., and Villar, A. 1989. A Review of Natural Products and Plants as Potential Antidiabetic Drugs. Journal of Ethnopharmacology, 27: 243-275, 1989.
Hypolipidemic 2-6 g/day	
Pesticide	
Spermicide	Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990.
Ubiquiot	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Ulcerogenic 500 mg/kg ipr rat	

BETA-SOLADULCINE	Plant	--	--	*
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BETA-SOLAMARINE	Plant	--	--	*
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Activities (2)

Antisarcotic Biosyn. Prod. Cancer Chemotherapy (Petit et al)

Antitumor Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.

BRASSICASTEROL	Leaf	--	--	*
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CAMPESTEROL	Leaf	--	--	*
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Activities (2)

Antioxidant IC37=10 uM

Hypocholesterolemic Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.

CHOLESTEROL	Leaf	--	--	*
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Activities (1)

Antioxidant IC43=10 uM

CITROSTADIENOL	Seed	--	--	*
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Activities (1)

Antirheumatic 2-5 mg/man

CYCLOARTENOL	Tissue Culture	--	--	*
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Activities (7)

Antibacterial

Antiinflammatory

Antirheumatic 2-5 mg/man

Antistaphylococcic

Hypocholesterolemic

Pesticide

Ubiquiot Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.

CYCLOARTENOL-24-DIHYDROLANOSTEROL	Tissue Culture	--	--	*
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D-GALACTOSE	Plant	--	--	*
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D-GLUCOSE	Plant	--	--	*
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Activities (1)

Antisecretory

D-XYLOSE	Plant	--	--	*
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DIOSGENIN	Plant	--	--	*
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Activities (7)

Antifatigue

Antiinflammatory

Estrogenic 20-40 mg/kg/day/15 day scu mus
 Hepatoprotective
 Hypocholesterolemic
 Mastogenic 20-40 mg/kg/day/15 day scu mus

GAMMA-SOLADULCINE	Plant	--	--	*
GAMMA-SOLAMARINE	Plant	--	--	*
GRAMISTEROL	Seed	--	--	*
ISOFUCOSTEROL	Plant	--	--	*
L-RHAMNOSE	Plant	--	--	*
LOPHENOL	Seed	--	--	*
LYCOPENE	Fruit	--	--	*

Activities (16)

Anticancer (Bladder)
 Anticancer (Breast)
 Anticancer (Cervix)
 Anticancer (Prostate)
 Antioxidant
 Antiprosthetic
 Antiradicular
 Antitumor
 Antitumor (Bladder)
 Antitumor (Breast)
 Antitumor (Cervix)
 Antitumor (Prostate)
 Cancer-Preventive
 Colorant
 Hypocholesterolemic 60 mg/man/day/3 mos
 Prooxidant 20 ug/g

Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.

LYCOPHYLL	Plant	--	--	*
LYCOXANTHIN	Plant	--	--	*
OBTUSIFOLIOL	Seed	--	--	*
SOLACEINE	Plant	--	--	*
SOLADULCAMARIDINE	Plant	--	--	*
SOLADULCIDINE	Fruit	--	--	*
SOLAMARGINE	Plant	--	--	*

Activities (9)

Antitumor
 Cytotoxic ED50=1.53 ug/ml
 Erythrocytolytic EC100=20uM
 Fungicide
 Hepatoprotective
 Insecticide
 Membranolytic
 Molluscicide
 Pesticide

Lin,* C-N., Lu, C-M., Cheng, M-K., Gan, K-H. The Cytotoxic Principles Of Solanum incanum. Journal of Natural Products, 53(2): 513-516, 1990.

SOLANIDINE	Fruit	--	--	*
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Activities (5)

Anticholinesterase
 Antifeedant 1 uM
 Pesticide
 Teratogenic
 Toxic

Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.

Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp.

Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.

SOLASODINE	Shoot	--	--	*
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